UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/020,538	11/30/2001	John R. Fredlund	83539DAN	9143

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>05 February 2007</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2-13,15-18 and 24-34* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *2-13,15-18 and 24-34* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

Response to Arguments

1.   Applicant's request for reconsideration of the finality of the rejection of the last

Office action is persuasive and, therefore, the finality of that action is withdrawn.

2.   Applicant's arguments, see Pre-Appeal Brief Request, filed February 5, 2007,

with respect to the rejection(s) of claim(s) 2-6, 8, 9, 10, 11, 13, 15, 16, 18, 24, 25, 26,

28, 30, 31, 32, and 34 under U.S. Patent No. 5530759 to Braudaway et al in view of

U.S. Patent No. 6304345 to Patton et al have been fully considered and are persuasive.

Therefore, the rejection has been withdrawn. However, upon further consideration, a

new ground(s) of rejection is made in view of U.S. Patent No. 5901224 to Hecht.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

4.   Claims 2-6, 8, 9, 10, 11, 13, 15, 16, 18, 24, 25, 26, 27, 28, 30, 31, 32, and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5530759 to Braudaway et al in view of U.S. Patent No. 5901224 to Hecht.

Regarding claims 8 and 26, Braudaway et al disclose a method of providing human visible information on an image (column 2, lines 6-11), the method comprising the steps of:

selecting a location on an image for human visible information (column 5, lines 6-23; The non-transparent locations determine the location where the pixel will be changed.);

analyzing pixels of the image at said location that will be used to create the human visible information to determine pixel values of said analyzed pixels (column 5, lines 6-67; column 6, lines 1-16);

adjusting the pixel values of said analyzed pixels by a predetermined amount (column 5, lines 6-15, lines 33-67; column 6, lines 1-6); and

printing the image with said human visible information thereon (column 4, lines 45-50), wherein said human visible information is presented with pixel values which are different from pixel values of an image area which surrounds said human visible information or from the pixel values that they have replaced (column 5, lines 6-24; The transparent area pixels will be different from the non-transparent pixel areas.). However Braudaway et al does not disclose wherein said selecting step comprises the step of determining an optimum location for said human visible information based on a spatial analysis of said image, and wherein the human visible information is not obtrusive.

Hecht disclose wherein said selecting step comprises the step of determining an optimum location for said human visible information based on a spatial analysis of said image (column 6, lines 4-15, 32-48, 57-67; column 7, lines 57-67; column 8, lines 15-21), and wherein the human visible information is not obtrusive (column 5, lines 57-67; column 8, lines 27-47; "inconspicuous".).

Braudaway et al and Hecht are combinable because they are in the similar problem area of image processing.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the unobtrusive method of printing as disclosed by Hecht with the system of Braudaway et al to implement unobtrusive printing of human readable data.

The motivation to combine the reference is clear because the system of Hecht provides a method for adding data to original documents wherein the new document is very similar to the original one (column 1, lines 6-12).

With respect to dependent claims 2 and 24, Braudaway teaches in (col. 5, lines 27-28, the conversion is preferably accomplished by means of a look-up table, fig. 2, 203, 206, and the amount of pixels can be chosen, increased or decreased: col. 5, lines 9-14, pixel values 0-127 are to be darkened and values from 129-255 are to be brightened) showing that the values of the analyzed pixels can be adjusted) a method according to claims 8 and 26 respectively, wherein said adjusting step comprises increasing the pixel values of said analyzed pixels.

With respect to dependent claims 3 and 25, Braudaway teaches in (col. 5, lines 27-28, the conversion is preferably accomplished by means of a look-up table, fig. 2, 203, 206, and the amount of pixels can be chosen, increased or decreased: col. 5, lines 9-14, pixel values 0-127 are to be darkened and values from 129-255 are to be brightened) showing that the values of the analyzed pixels can be adjusted) a method according to claims 8 and 26 respectively, wherein said adjusting step comprises decreasing the pixel values of said analyzed pixels.

With respect to dependent claim 4, Braudaway teaches in (col. 4, lines 64-67, three eight-bit samples may describe one of 256 levels of red, one of 256 levels of green, and one of 256 levels of blue for a color image; col. 5, line 66, fig. 2, 214, the final scale factor used to scale the pixel is calculated) a method according to claim 8, wherein said adjusting step comprises changing the pixel value (col. 5, line 30, for a color image, the output of block 202 fig. 2, is the set of linearized R, G, B values of the pixel) of at least one color channel of said analyzed pixels.

With respect to dependent claims 5 and 31, Braudaway teaches in (col. 7 lines 1-8, for color images, the watermarking procedure is essentially the same, except the linear brightness of each pixel must be extracted from some combination) a method according to claims 8 and 26 respectively, wherein said adjusting step comprises adjusting the pixel values of said analyzed pixels by different amounts (col. 5, line 30, for a color image, the output of block 202 fig. 2, is the set of linearized R, G, B values of the pixel) in each color channel.

With respect to dependent claims 6 and 32, Braudaway teaches in (col. 5, lines 24-25, in fig. 2, 202, the original image pixels are converted to a linear brightness scale 209) a method according to claims 8 and 26, wherein said adjusting step comprises adjusting the pixel values of said analyzed pixels by different amounts according to a value of an original pixel.

Regarding claims 9, 16, and 27, Hecht discloses a method according to claims 8, 15, and 26 respectively, wherein said optimum location of said image for said human visible information is at least one of an area without high frequency detail on said image, an area of repetitive detail in the image, and a dark portion area of the image (column 7, lines 47-67; In figure 5, 72a' contains glyph which is relatively dark area of image 70' and also repetitive area.).

Regarding claims 10 and 34, Hecht discloses a method according to claims 8 and 26 respectively, wherein said optimum location of said image for said human visible information is at least an area where faces or flesh are not detected (column 8, lines 41-54; Figure 6, 7 show that the information is placed away from image area. Since face image can be located in image area the information thus placed is area where faces or flesh is not detected).

With respect to dependent claims 11 and 28, Braudaway teaches in (fig. 1, 112, 116 that the image is processed, so this step means a portion of the image is been analyzed) a method according to claims 8 and 26 respectively, wherein said analyzing step comprises analyzing a portion of the image.

With respect to dependent claims 13, 18, and 30, Braudaway teaches in (col. 4, lines 46-47, the system can then display, "in this embodiment col. 4, lines 52-53, the watermark image is a monochrome image, meaning it is human visible and human detectable"; the images on a display device 124 or print the images), a method/system according to claims 8, 15, and 26 respectively, wherein said human visible information is human readable and/or human detectable.

Regarding claim 15, Braudaway et al disclose a system for providing human visible information on an image, the system comprising:

a computer device adapted to analyze pixels of an image that will be used create human visible information to determine pixel values of said analyzed pixels, said computer device being further adapted to adjust the analyzed pixel values of said pixels by a predetermined amount (column 4, lines 10-12, 30-37; column 5, lines 6-67; column 6, lines 1-16; column 5, lines 6-15, lines 33-67; column 6, lines 1-6); and

a printing device adapted to print the image with said human visible information thereon(column 4, lines 45-50), wherein said human visible information is printed with pixel values that differ from pixel values of an image area which surrounds the human visible information or from pixel values that they have replaced (column 5, lines 6-24; The transparent area pixels will be different from the non-transparent pixel areas.). However Braudaway et al does not disclose wherein said computer device is further adapted to determine an optimum location for said human visible information based on a spatial analysis of said image and that the human visible information is not obtrusive

Hecht discloses wherein said computer device is further adapted to determine an optimum location for said human visible information based on a spatial analysis of said image (column 6, lines 4-15, 32-48, 57-67; column 7, lines 57-67; column 8, lines 15-21) and that the human visible information is not obtrusive (column 5, lines 57-67; column 8, lines 27-47; "inconspicuous" .).

Braudaway et al and Hecht are combinable because they are in the similar problem area of image processing.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the unobtrusive method of printing as disclosed by Hecht with the system of Braudaway et al to implement unobtrusive printing of human readable data.

The motivation to combine the reference is clear because the system of Hecht provides a method for adding data to original documents wherein the new document is very similar to the original one (column 1, lines 6-12).

5.   Claims 7 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Braudaway et al in view of Hecht as applied to claim 8 above.

Considering dependent claims 7 and 33, Braudaway discloses (col. 5, lines 6-15, pixel values 0-127 are to be darkened and values from 129-255 are to be brightened) showing that the values of the analyzed pixels can be adjusted.

However, Braudaway fails to specifically disclose adjusting the pixel values of said analyzed pixels by less than 10% of full scale.

As is obvious from the above discussion that the analyzed pixel values can be adjusted by any desired amount of the scale. It would have been obvious to one of ordinary skill in the art to select less than 10% of the full scale because this would not significantly deteriorate the image.

6.   Claims 12, 17, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Braudaway (U. S. Patent No. 5,530,759) in view of U.S. Patent No. 5901224 to Hecht further in view of Hatakenaka et al (U.S. Patent No. 6,563,542).

With respect to dependent claims 12, 17, and 29, Braudaway does not teach, wherein said human visible information is at least one of a number, a URL, a bar code, APS IX frame titles, text graphics, a password, a company logo and a crop box on front of the print.

Hatakenaka discloses in Figs. 6A, 6B, 6C, 6D and 7 that the human visible information can at least be a number 'date' on front of a print.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include numbers for Braudaway's watermark information.

The motivation would be for identification purpose (col. 2, line 47).

Other Prior Art Cited

7.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

U.S. Patent No. 5444779 to Daniele discloses printing system.

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Beniyam Menberu whose telephone number is (571)

272-7465. The examiner can normally be reached on 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Aung Moe can be reached on (571) 272-7314. The fax phone number for

the organization where this application or proceeding is assigned is **571-273-8300**.

Any inquiry of a general nature or relating to the status of this application or

proceeding should be directed to the customer service office whose telephone number

is (571) 272-2600. The group receptionist number for TC 2600 is (571) 272-2600.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for published

applications may be obtained from either Private PAIR or Public PAIR. Status

information for unpublished applications is available through Private PAIR only.

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Should you have questions on access to the Private PAIR system, contact the

Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Patent Examiner

Beniyam Menberu

BM

05/26/2007

KIMBERLY WILLIAMS
PRIMARY PATENT EXAMINER